

♦ HEALTH ♦

A WEEKLY JOURNAL OF
DOMESTIC AND SANITARY SCIENCE.

"Reason's whole pleasure—all the joys of sense—
Lie in three words, HEALTH, PEACE, and COMPETENCE."—Pope.

EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

VOL. XII.—No. 292.

FRIDAY, NOVEMBER 9, 1888.

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EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: FRIDAY, NOVEMBER 9, 1888.

CONTENTS OF No. 292.

	PAGE		PAGE
Notes by the Way: By the Editor.	81	Popular Science Papers:—	
Original Essays:—		Some Unusual Developments in	
Does Coffee-Drinking Cause Blind-		Man. By Francis J. Shepherd,	
ness?—The Question Answered.		M.D.	88
By M.D.	82	Public Health:—	
The Chemistry of the House. By		Sewer-Gas Poisoning. By Henry	
Dr. Drinkwater, F.C.S. Sixth		Hun, M.D. Second Article	91
Paper	84	Jottings from the Journals:—	
Personal Health:—		Women Who Go to College—Back	
Sleeplessness.	85	from the Holidays—Trained	
Manners and Meals	86	and Untrained—Doctors should	
The Family Circle:—		Write Plainly.	92-93
Milk for Infants. By Frederick		IMPORTANT ANNOUNCEMENT.	94
M. Warner, M.D.	87	Our Letter Box:—	
		Letters to the Editor—Saccharin	95
		Queries and Answers:—Replies:	
		General, Sanitary, and Medical	95

Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—Herder.

IN a recent article in *HEALTH* (No 284), "M. D." criticized the statements of Messrs. Roy and Adams regarding tight-lacing. I observe that in the Anthropological Section of the British Association, Dr. Garson, communicating the Report of the Anthropological Laboratory at the Manchester meeting, gave the results of observations on the Breathing Capacity in Females as Compared with that of Males. He showed that even moderate lacing had a very deleterious effect on the system generally. The general opinion of the section seemed to be that Dr. Garson's views were consistent with the results of the experience of physicians. It is satisfactory to be able to record that physiologists have a full and complete answer to the commendations given by Messrs. Roy and Adams to corsets and stays at large.

A MEDICAL officer of the health department in America was speaking recently about the danger that lurks in diseased bed-clothes, to a reporter. "Take notice," he said, "of the fact that disease and death lurk in the very pillows and bolsters on which we lay our heads at night. It is easy to talk of down and feathers, but it is a fact, if they were cut open, these articles would be often found to be more or less stuffed with the most heterogeneous materials."

"PILLOWS, bolsters, and beds have been examined and found to contain portions of filthy, coarse, black serge, apparently parts of soldier's coat sleeves, pieces of dirty, greasy, silk dresses, old worsted braid from the borders of womens' gowns, soiled linen rags and coloured calico, and even nuts and walnut shells and pieces of crinoline wire. The bedding in this case was bought new, we are assured, a few years ago of an expensive and respectable upholsterer. Moreover, a woman who was employed to do the unpicking work of the trade informed the lady of the household that the practice of stuffing bedding with dirty rubbish and rags was very general, and that few beds or bolsters contain only the materials of which they are supposed to consist." On this side of the Atlantic, like frauds are continually being perpetrated. A close examination of new bedding is a necessary condition for health.

DR. TOWERS SMITH contributes to a medical journal the following interesting record of his treatment of obesity. Finding that his weight had increased enormously, he determined to try the following treatment for corpulence:—On March 1st, 1885, I weighed, in the Jermyn-street Turkish Bath, 15 stones 10 pounds: on the 2nd I commenced the treatment, which was as follows: Breakfast: one pound of rump steak, without fat. Lunch: another pound of rump steak. At dinner: one pound of grilled cod, and one pound of rump steak. I drank at intervals during the twenty-four hours a gallon of hot water. The last thing at night I took two tablespoonfuls of Scotch whisky in cold water, and night and morning five grains of bicarbonate of potash. On the 16th I weighed again in Jermyn-street, and I found myself reduced to 14 stones 6 pounds.

I THEN reduced the amount of water, and began to take tea or coffee, reducing the quantity of meat, and taking toast with it. On April 8th my weight in Jermyn-street was reduced to 13 stones 4 pounds. I gradually from that date returned to my usual habits of life as regards diet; and on the 30th I weighed again, and my weight was 12 stones 11 pounds, and since that date up till now has not materially varied: I have eaten and drunk as I pleased.

FINDING this course of treatment was personally successful, I have since treated forty patients with equal success. Before I placed myself under treatment I found my breathing much oppressed in going upstairs, and my work as a general practitioner irksome and fatiguing. I have derived enormous benefit from the reduction of fat,

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AT THE

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and feel infinitely better, and am able to cycle as much as fifty miles a day with comparative ease. I think it may be useful to put my experience before the profession.

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A CORRESPONDENT of the *Lancet* writes, regarding the "top" or "silk" hat as follows:—"Would it not be a great boon to medical men to abolish the use of the tall silk hat known as the 'top hat'? Has it not every disadvantage as a comfortable and hygienic headgear? And could not a substitute be found made of soft felt, the same material as clergymen's hats are made of, and somewhat the shape of the hat called the 'Beaufort,' one flat at the top and about two-thirds the height of the top hat, which would look equally professional and be infinitely more comfortable? The tall hat now worn constricts the head, makes many people's heads ache, impedes circulation in the scalp, and is always a nuisance in wet weather—a fact appreciated this summer. During, in his work on the skin, goes so far as to say that such hats are a mechanical cause of baldness in men."

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To quote his words, "The hard rim of the hat pressing on the temporal arteries narrows the blood-stream, and checks the advance of pabulum to the hair. Those seated farthest from the periphery suffer most, as on the crown, though the temples, as their name indicates, are also easily affected, no doubt because the skin there is wholly dependent on the temporal arteries for its supply." Evidence of its causing headache can be easily obtained; but, to quote a standard work, that of Bristowe's *Practice of Medicine*, "Thus pain almost accurately resembling in all its characteristics that of megrim may be induced by the simple pressure of an unyielding hat upon the frontal branches of the fifth pair, which though cured by removal of that pressure, often lasts long enough." If only a sufficient number who wished a change—and I am sure they are numerous—would abolish its use, it would be a great benefit in allowing a young man (the older men can more easily please themselves) to wear a comfortable hat without being thought unprofessional in appearance. "Your bonnet to its right use; 'tis for the head."

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ONE Dr. Durand, wishing to test the practical effect of mind on body, gave a hundred patients a dose of sweetened water. Fifteen minutes after, entering apparently in great excitement, he announced that he had by mistake given a powerful emetic, and preparations must be made accordingly. Eighty out of the hundred patients became thoroughly ill, and exhibited the usual result of an emetic; twenty were unaffected. The curious part of it is that, with very few exceptions, the eighty subjects were men, while the strong-minded few, who were "not to be caught with chaff," were women.

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A CONGRESS of the advocates of cremation was opened in Vienna last month. It was stated during the proceedings that there existed about fifty crematories in all, the majority of which are in the United States, one in Germany (in Gotha), twenty in Italy, one in England, one in Switzerland, and one (which is not quite complete) in France. Since the date named, however, I hear of four crematories being established at Père-la-Chaise, in Paris.

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HERE is a novel origin of a medicinal spring. A farmer, says an American exchange, revenged himself on his neighbour by throwing ten pounds of Epsom salts into his well. As soon as the water began to taste, the report went out that it was a mineral well, and a dozen people rushed to buy the farm.

Original Essays

"Life is not to live, but to be well."—*Martial*.

DOES COFFEE-DRINKING CAUSE BLINDNESS? —THE ANSWER.

By M.D.

In the last number of *HEALTH*, we gave Mr. Holaday's views on the relations between coffee-drinking and blindness at length. In criticizing his paper, one may at first remark on its somewhat discursive character. Mr. Holaday by no means sticks to his text, while it is easy to show that many of his statements are utterly unsupported by facts.

Primarily, also, I may enter a protest against what appears to me to be a growing and increasing habit in connection with health-matters and medical science—I allude to the custom of raising a "scare" in the public journals regarding the presumably deleterious properties and effects of common articles of food or luxury. For instance, not so long ago, a discussion (provoked, doubtless, by some absurd rumour respecting the cause of the illness of the late German Emperor) was raised on the question, "Does smoking cause Cancer?" No sooner was this topic disposed of (by *HEALTH* especially), than another alarmist inquires in loud accents, "Does smoking cause Blindness?" Then ensues a long explanation regarding tobacco-amblyopia—a matter also fully discussed and explained in the pages of this journal. Long prior to either of these "scares," a correspondent, writing to the Editor of *HEALTH*, inquired "whether or not the use of tomatoes caused cancer?" and again the pages of this periodical were occupied with the discussion of this, it is to be added, needless "scare."

It is far from my purpose to deny that a certain measure of information may be elicited even through the ventilation of the absurdities propagated by the scares of those whom our American cousins, in that somewhat apt and happy choice of epithets which distinguishes them, name "cranks." People who read the criticisms to which the discussion of the scare gives rise, cannot fail to learn something regarding the true state of the question discussed, and also concerning the folly of the alarm. Still, on the other hand, the expression of such alarmist views is to be deprecated on the whole, on the principle that the mere statement of error is not without a prejudicial influence on the minds of the people. Your "crank" is always a self-sufficient, self-assertive, individual, who scouts at the notion of any flaw or defect existing in his theory. His is not the asking attitude of the student of science. He does not seek information; his sole aim is to pose as a great teacher and as a revolutionizer of public opinion. While, lastly, if we reflect that, for the most part, such alarmists are not in any degree specialists in the very matters regarding which they dogmatize so freely and confidently, we may have good cause to remember the aphorism that "fools rush in where angels fear to tread."

The above remarks apply to the paper of Mr. Holaday on "Coffee-Drinking as a Cause of Blindness." His first error is that of arguing from particulars to universals. His own eyesight (so he thinks) became affected after coffee-drinking, therefore coffee must be prejudicial to the sight of everybody. He makes inquiries at Council Bluffs, and discovers that "different persons" suffered from failing sight—the unfortunate person in each case being "a regular (he does not say excessive) coffee-drinker." But

if Mr. Holaday is easily contented with mere assertion, unsupported and unverified, science, he will find, is not to be pursued in the same easy-going, inexact fashion. Before any reliance can be placed on Mr. Holaday's statements about the effect of coffee on the persons he describes, ordinary mortals will require full statements regarding the age, profession, habits, health, and ailments of the "different persons" on whose condition he founds his tragic theory of coffee-drinking.

Certain of Mr. Holaday's other statements exhibit the same fundamental error of attributing to one theoretical cause, symptoms or effects liable to be induced by many and widely varied causes. Thus we read that he "had long noticed that the eyes of old coffee-drinkers had a dry and shrivelled appearance." Let us ask ourselves seriously what is this statement worth as a piece of evidence? Is it at all unusual for the eyes of old persons, coffee-drinkers or not, to present a "dry and shrivelled appearance"? Does Mr. Holaday expect the aged eye to be bright and lustrous as in the full flush of youth? Take another statement by way of showing the absurdly loose way in which our author talks. He says that long ago he found out "that a cup of coffee leaves a night-shade on the brain, which continues longer than an eclipse of the sun." This may be a poetic fashion of stating a belief; it is assuredly as absurd a piece of writing as ever was penned by a fanatical "crank." In the first place, what is a "night-shade on the brain"? and, in the second, what relation (in point of time) is meant to be expressed by the said mysterious "night shade" being of longer duration than a solar eclipse? These are interesting points no doubt, but the necessity for inquiry as to their meaning does not in any way contribute to the expression of confidence in Mr. Holaday either as an accurate writer or as a logical reasoner.

Again, he says that he discovered a single cup of coffee to have a perceptible effect upon his eyes. What does this prove? Only that Mr. Holaday's eyes must be singularly and abnormally sensitive to the action of a small quantity of coffee (presuming he is correct in his diagnosis of the cause of his eye-weakness), and therefore that argument about his own over-sensitive eyes cannot be held in any sense as applying to the eyes of other people. When Mr. Holaday goes in for scientific exposition, he exhibits as dismal a failure as in his application of metaphor and of logic. He tells us that the optic nerve (or that of sight) has a great sympathy for the nasal cavity (he might have said "nostril"), which has, distributed within its tissues, the first pair of brain-nerves—those of smell. Then he proceeds to say that the nasal cavity must be naturally "a principal place to be effected by any drinking habit"; and of this latter and startling theory he gives a particularly choice illustration. "For instance," adds our author, "to partake of a dish of soup will sometimes cause a person's breathing to become thick (*sic*) and decidedly laboured."

"The cat is out of the bag" at last. Mr. Holaday, puzzled to know how and why his theoretical coffee-drinking affected his sight, constructs an explanation all "out of his head," as the boys say. He knows, doubtless, that a cold in the head produces irritation of the eyes; therefore, he will assume that coffee swallowed affects the nostrils, and that the eye irritation he believes in, is thus propagated to the organs of sight. How the swallowing of coffee can directly affect the nostrils, as Mr. Holaday presumes, it is difficult to imagine. True, the nostrils open backwards into the pharynx, or back part of the mouth, but the coffee we swallow does not gain access to the nose, otherwise it would escape from the

nostrils, as the smoke inhaled by the cigarette-smoker is made, at will, to escape from the nose-passages. If Mr. Holaday possessed even the slightest acquaintance with elementary physiology he would have known that in swallowing, nature closes our hinder nostrils (*i.e.*, at their mouth end) in order to prevent anything escaping into the nose-passages; and his theory of the affection of the eye by coffee through its affecting first the mouth, and secondly the nose, is about as absurd an idea as that which would maintain that the moon is constructed of cheese! One might also justifiably ask whether it would not be advisable (in the interests of its readers) that the *North American Review* should keep a scientific sub-editor on its premises? I make this remark because no periodical, with the slightest pretensions to scientific accuracy, would have admitted to its pages a paper in which the author makes the non-sensical statement that "the principal nerves of the brain branch off from the nasal cavity." In other words, it is alleged that all the nerves of sight, hearing, taste, &c., have their origin in the nose!

I pass over other absurd statements made by Mr. Holaday—such as the assertions that "Coffee eats into (*sic*) the digestive membranes," or that "it honeycombs the body" (whatever is meant thereby), or that "it leaves the face a grinning skeleton." Such whimsicalities need no comment. They indicate the rash, untrained, dogmatic mind of the "crank," and one's wonder grows that they should have appeared without comment, editorial or otherwise, in such a high class magazine as the *Review* must unquestionably be taken to represent. That which remains for discussion, in this article, is the statement of the true place coffee occupies in relation to the production, theoretical or real, of disease.

Let us note what coffee really is from a chemical and medical point of view. This topic has been discussed from the former standpoint by Dr. Drinkwater in the papers on "Household Chemistry," now appearing in *HEALTH*. Thus, coffee contains a volatile oil, astringent or tannin-like matters, and *caffein*, which is its active principle. Medically, it is the *caffein* which plays an important part in producing characteristic effects. Taken in moderation, coffee relieves hunger and lessens fatigue, while Lehmann argued that it diminished the process of tissue-waste. So far from producing evil effects, coffee, taken in moderation, tends to "clear the brain," while it certainly relieves nervous headache, and is valuable in spasmodic asthma. Upon the body-ends of the sensory nerves—those which Mr. Holaday takes under his especial care—including the nerves of smell, taste, sight, &c., coffee has no action. Therefore, this physiological fact at once cuts the ground from under the feet of all theories that coffee-drinking affects the eye through the nose, or through any nerves ending, or beginning, in sense-organs.

If, then, there is not the slightest justification for Mr. Holaday's assertions in the ordinary use of coffee, what, it may be asked in conclusion, do we know about the effects of coffee-drinking in *excess*? The excessive and irrational use of coffee is to be condemned roundly and soundly, just as the abuse of anything merits disapproval. Taken to excess, coffee will produce dyspepsia and other digestive troubles, and it will disturb sleep, when taken late at night especially, owing to its stimulant action. These effects we can understand, but among all the results even of immoderate coffee-drinking, I fail to find recorded any example of injury to sight.

Dr. B. W. Richardson, in his work "The Field of Disease," says that he is "not aware that actual organic disease (*i.e.*, disease of the substance and structure of the

body) ever takes place from the use of tea, and it would, therefore, be more correct to speak of the phenomena it induces as phenomena of functional derangement (*i.e.*, of the actions of organs) rather than of actual disease." Of coffee, Dr. Richardson speaks in a similar strain. "There is no evidence," he says, "as to its ever being a cause of actual organic change. Its effects may be described as entirely functional, and as being more correctly defined under the head of derangement than of disease."

That "coffee-drinking causes blindness," is, therefore, a statement which ranks as an utterly unsupported assertion. Even were it proved to affect the eyes in any way, the ailment would not certainly be described as blindness dependent on serious change or disease of eye structures. As far as Mr. Holaday's alarmist scare is concerned, we may all enjoy our coffee, in moderation, as before, undeterred and unaffected by the crude conceptions of the "crank."

THE CHEMISTRY OF THE HOUSE.

By DR. DRINKWATER, F.C.S., &c.

Lecturer on Chemistry in the Edinburgh Medical School, &c.

SIXTH PAPER.

HOUSE REFUSE.

At first sight the least interesting subject of our series, "What is the good of house refuse? mere rubbish, throw it away and be done with it, we don't want to know anything more about it." These are the remarks that my readers will make on reading the title of this article. Supposing, however, that no one cared anything for this refuse, supposing it were allowed to accumulate, what would become of us and what would become of our neighbours? Anyone living in a large town knows that a staff of men is employed in removing it from our houses; but few enquire, and fewer care, what becomes of it after it has left our hands.

House refuse is a somewhat vague term, one which embraces a large field, so that it would be as well for me before leaving my text to define what I understand by that heterogeneous mixture classed as rubbish.

In a strictly scientific sense there is no such thing as rubbish, everything has a use; but in a popular sense anything for which we do not know a use is called rubbish. Rags, bones, waste paper, waste kitchen grease, old boots and shoes, worn out tin cans, ashes, &c., &c. The *et cetera* including, perhaps, a deal more than I have specified.

We will take them in order: first of all the rags. There is variety even in rags, for we have cotton rags, linen rags, coloured rags, and white rags—some of the latter, however, hardly deserve the name. Each of those various classes has its special use and value. After we have parted with the rags to the itinerant vendor, who has no doubt given the highest price for these articles (for I have yet to come across the rag and bone merchant who confesses to give the lowest or, in fact, anything but the highest), they find their way to the wholesale rag merchant, where they are picked over by women, and sorted into their different varieties. The cotton rags are converted into paper by a combination of mechanical and chemical means—the rags being first bleached then soaked in strong soda, and afterwards converted into pulp by revolving knives. The pulp is now run on to wire frames, the water sucked away from it, and the resulting paper dried by passing over heated rollers. If white cotton rags have been used, fine white

paper is the result. For brown papers and wrapping papers of all descriptions, materials which even the most unprejudiced would call rubbish are used: old cocoa matting, waste paper, old book covers, worn out floor cloth, tarpaulins that have served their day, all can be converted into paper of an inferior quality. Sawdust, although not strictly a form of house refuse, can now be used, and is so used, for making both paper and cardboard. Besides the cotton rags, there are also woollen rags, which cannot be turned into paper, but yet they have their use. The best quality (for there is quality also in rags) of woollen rag is turned into "shoddy"—a kind of inferior cloth used for making cheap clothing. To make shoddy, the woollen rag is torn up into shreds by machinery, oiled and spun usually in presence of steam. Woollen rag that will not make shoddy is turned into felt and drugget; some of it is so bad that it is even unfit for this purpose, but still it has its use. It is dried and ground to fine powder, dyed of some brilliant colour, and used to make flock paper. Ordinary wall paper is taken, and on it is printed some pattern in colourless glue or size. The dried and coloured woollen dust is powdered on the paper to which it adheres on the glue patterns; the result is that a raised coloured pattern is left on the papers.

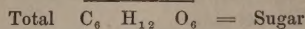
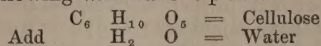
From these various manufactures there is again waste, and this, along with any unsuitable pieces of woollen rag, is used by the chemical manure manufacturer, for these pieces of woollen rubbish contain a large quantity of nitrogen—an element of great food-value to plant life.

Truly, we are in an age when nothing need be wasted; everything has a use. There are materials which are composed of both cotton and wool, and in time, of course, these materials come to the condition of rags and are numbered with the rubbish. There are two ways of dealing with this mixture, and both are in operation. One is to boil it with dilute oil of vitriol, when the cotton is converted into a kind of sugar, leaving the wool uninjured; the other is to heat the rags with superheated steam, when the wool is converted into a valuable manure, leaving the cotton ready for the paper maker.

Some twelve months ago a somewhat sensational paragraph went the round of the papers, that a manufactory in Germany was converting rags into sugar for the use of brewers, and that some of this sugar was finding its way into this country. This was undoubtedly true, and I am sure my readers will not be satisfied unless I let them into the secret of how this apparent impossibility was done. I say was, because the German government has since exercised its authority, and, on sanitary grounds, suppressed the manufacture.

Cotton consists of a substance called cellulose, which is comprised of the three elements, carbon, hydrogen, and oxygen, and in the proportions of six atoms of carbon, ten atoms of hydrogen, and five atoms of oxygen. Now, you will remember from what I stated in my introductory article that the very essence of chemical change was the entire difference of the compound to the elements containing it. Now, here we have a very good example. Carbon is a black solid, hydrogen a colourless gas, and oxygen the same. Yet, from these simple and widely differing materials cotton is produced. By the various chemical forces at work in a growing plant sugar happens to be composed of the same elements as cotton, only in different proportions, *viz.*, six atoms of carbon, twelve atoms of hydrogen, and six atoms of oxygen, the difference between the two being two atoms of hydrogen and one atom of oxygen, or in other words, water. That is to say, if we can make water chemically combine with

cellulose, sugar is the result. Using the chemical formula, the following will make it plainer.



The sulphuric acid or oil of vitriol causes this water to be taken up and explain how it is that sugar can be made from cotton rags. I have mentioned a similar change in the article on beer. Starch was here converted into sugar, but starch and cellulose happen to have the same chemical composition.

One other use for the woollen rags and I have done. If they are mixed with pearl ashes and scrap iron and heated together, a yellow substance is produced, called prussiate of potash; a substance perfectly harmless in itself but capable of furnishing a valuable medicine as well as one of the most powerful of poisons, viz., prussic acid. It is also used by the dyer for preparing that dark blue colour known as *Prussian Blue*, and this same Prussian Blue, dissolved in oxalic acid, is the soluble blue used by the laundress in getting up our linen. This blue colour is formed when the yellow prussiate of potash is mixed with any soluble iron compound.

CELLULAR CLOTHING.—We advise those of our readers who have not yet tested the merits of the "Cellular Clothing" (advertised in our pages) to procure from the company of that name, at 75, Aldermanbury, London, E.C., the neat and attractive little pamphlet on *Cellular Cloth for the Clothing of the Body; the Theory and the Practice*. This brochure, which is admirably written, contains a full digest of the science of clothing, and shows clearly the soundness of the principles illustrated in the "Cellular Cloth" as an admirable body-covering, both for personal clothing and for sheets and other materials.

THE International Ironmongers', Iron, and Metal Trades' Exhibition opens at the Agricultural Hall, Islington, on Monday, November 12th, at 1 p.m., and remains open every day from 10 a.m. to 9 p.m., till Saturday, November 24th. This, the first exhibition directly affecting the vast field of the ironmongery and kindred interests, bids fair to become one of the most popular and successful trade exhibitions of the day. The Agricultural Hall has, from time to time, been devoted to a considerable variety in the way of exhibitions, but never, we think, to one that will command so large an amount of general interest as this, embracing as it does all branches of metal work, from iron girders and hydraulic lifts to the latest invention in teapots and domestic machinery. Mr. Harry Etherington, so long known in connection with the ever-successful Sportsman's Exhibition, is the manager, and seems determined to make this eclipse any of his previous successes. Military bands have been engaged to play every afternoon and evening.

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Personal Health

"Be timely wise;
With health all taste of pleasure flies."—Gay.

SLEEPLESSNESS.

A GENTLEMAN consulted a physician the other day owing to his being troubled with sleeplessness. "What is the cause?" queried the doctor. "I am worried to death because my patrons don't pay their bills promptly, but let them drag along." "Then," said the doctor, "you had better close up your business at once, and start it over again on proper business principles."

This patient had taken sulphonal, urethane, bromide of potassium, and, finally, chloral, and was thus driving his brain to destruction. If a man suffered headache from a thorn in his side, he would hardly take chloral until the offending prickle had been removed. There are many kinds of thorns—not less painful than those that grow on bushes—and a very large number of those troubled with insomnia owe their sleepless nights to a thorn not yet extracted. A sleepless brain is a worn, jaded, irritable part, filliped beyond measure until it can no longer repair each day's damage. In despair of perfect rest, it has abandoned sleep. Medicine possesses no more useful agents than hypnotics, and, wisely employed, they are frequently of the greatest service.

A form of inquisitorial punishment was to keep a man awake, thus producing delirium and lunacy, and filling the victim's cell with phantom monsters to torment him. It is the function of science to prevent this sort of affliction. The writer recalls a case of typhoid fever seen many years ago, where maniacal excitement prevailed, and the wild and fevered patient was tied with ropes to his bed. Now, the physician would hardly need ropes, for the brain, and not the body, would be chained. "It is no exaggeration to state," writes Dr. Henry Wetherell, of the Pennsylvania Hospital for the Insane, "that the excited wards have entirely changed in character for the better since the introduction of hyoscine; and its beneficial results in acute cases have been very encouraging."

But it is with mild forms of sleeplessness that we are at present interested. Some time ago Dr. Lauder Brunton reported upon the use of small doses of strychnine in insomnia. He reasoned that if the sleeplessness were due to nerve-centres being somewhat below par, the strychnine might supply the natural stimulus to induce sleep. The writer recollects a case where the patient, a barrister, could not sleep, was restless and irritable, and in a chronic state of melancholy. The patient was given the Elixoid of Quinine, Iron and Strychnine, and the effect was truly marvellous. If there is one drug more than another which stimulates the higher nerve-centres without causing subsequent depression, it is strychnine. There is a host of diseases assignable to nervous debility, every one of which will vanish after the medically-prescribed use of a preparation like the foregoing, as Memnon with the dawn.

In many cases strychnine might do harm—they are those accompanied with great brain-excitation. In such patients sulphonal may be used. It is safe, and in a sufficiently large dose thoroughly efficient; but a drawback to it is the price. Eight Tabloids is a dose. Bromide of Potassium is oftentimes efficient, and may be taken in ten-grain doses in syrup and water. Paraldehyde is unpleasant, but urethane is applicable and effective in mild cases. Three urethane tabloids are a dose.

There is another noteworthy fact to be taken into account. The proportion of fat in the nervous system is enormously greater than in any other part; and in starvation this apparatus is the last to give up its fatty constituents. The free eaters of fat are not liable to sleeplessness, and the importance of oil in this complaint is certainly overlooked. A little of the Kepler Solution three times a day will certainly be well-timed and greatly beneficial in every way. Many a wise *littérateur* knows fully the value of oil to brain-workers; and many a time, in his most readable books, has the late Dr. Fothergill dwelt upon this point. The man who takes a breakfast of bacon will stand his mental work better if he breakfast on fish. Brunton cites the case of an eminent barrister who always took a dose of cod liver before entering court.

MANNERS AND MEALS.

(Concluded.)

The duty of the entertainer among us is to subordinate his own dinner to attention to the perfect service of his guests. Among the northern Algonkins and Iroquois, he had another function. He must not eat, and no one talked, but his special duty was to sing. In some Chinese circles the entertainer goes out of the banquet-room, and leaves his guests to unobserved revelry. Davy Crockett would have approved of this, as he declared that the politest man he ever saw was the Philadelphian who handed him the decanter of whisky and then looked out of the window.

It is laid down in some books of etiquette that upon the conclusion of each course, in order that the servant may be aware that the time has arrived for a change, the guest shall lay his knife and fork parallel to each other upon his plate, but it is also observed that it is extremely vulgar to place these instruments crosswise upon the plate. There is a tradition in reference to the crosswise arrangement, that it accompanied a religious formula of blessing the pabulum which had then been consumed and was relegated to the digestive apparatus. In this connection it may be noted, that, before the fork was common, the Guelphs or imperials placed their knives and spoons longwise, and the Ghibellines or papal faction placed theirs crosswise, on the table. This practice of subsequent blessing has gone into desuetude with even more generality than has that of invoking preliminary grace. Becoming rejected, persons who used the sign connected with it showed themselves behind the times; *videlicet*, low-bred or vulgar.

In all repasts of uncivilized peoples it is remarkable that certain kinds or parts of food were refused by particular individuals, or avoided by the whole body of feeders.

At this time and in this country, but two relics of these superstitions would probably be met. One might occur on any day in case a strict Israelite were present; and another, relating to the days of the week and seasons of the year, would be apparent in the abstinence of other religionists.

The explanation once offered, that the Mosaic prohibition of certain animals, especially the hog, as food, was founded in profound hygienic wisdom, is not now considered satisfactory. Pork in good condition is recognized to be as healthful food as other meats in the same condition throughout the world, and it is now eaten with the same immunity in Syria as in Ohio. The modern Israelites offer most interesting notes to the ethnologist by their continued preservation, in the midst of a high

civilization, of the religious taboo of savagery. This rite has had paramount influence beyond that of their written doctrines, in their segregation from the nations in which they have sojourned; and, now that it is becoming less strictly observed, there are evidences of their ceasing to be a peculiar people.

The refusal, at certain times and seasons, of food that in itself is hygienically good and palatable, in placation of a deity, or, without further explanation, to avoid bad luck, is well known among the lower tribes of men. Fasting may be either *jejunium*, in which all kinds of food and drink are prohibited, or *abstinentia* in relation to specified articles.

The origin of fasting is probably to be found in physiological considerations. There is a marked loss of appetite in the reflex result of grief, fear, and other strong emotions, from which noticed fact abstinence may become the conventional symbol and sometimes pretence of those emotions, and afterwards a formal act of homage to their inspiring cause. Certain it is that the practice has been found in all times and in every race of man, and therefore has no necessary connection with Christianity.

A similar explanation, *pro tanto*, attends the substitution of fish for other meats; but this topic has some peculiar features. In the early riparian populations the arrival from the mysterious depths of waters of the shoals of fish, on which they depended, was, and still is among savages, always signalized by religious ceremonies. In the same connection may be noted the rites of our plains Indians in imploring and celebrating the coming of the less mysterious herds of buffalo. The wondrous fecundity of the fish early made it the symbol of life and the creative power. The Israelites often relapsed into the worship of the fish-gods of Phœnicia. In the early Christian Church the fish symbol for Christ, adoption of which was probably influenced by the traditional sentiment indicated, anteceded the acrostic of his name and titles in Greek, *Ιησοῦς Χριστός Θεοῦ Υἱός Σωτήρ*, presented by the letters of the Greek word *ΙΧΘΥΣ*, though the permanence of the symbol was doubtless enhanced by the literary coincidence.

The old doctrine of "signatures," so called, had its effect in the adoption of fish as spiritual food. It was cold, and the meat was generally white, thus coinciding with the symbolism of temperature and colour to express purity.

It is fortunate that some rules in relation to repletion are no longer observed. One which was noticed among the Hurons and the Canadian Algonkins by the early French missionaries, and styled *le festin a manger tout*, consisted in the religious obligation, sometimes attended with loss of life, of the communicants to eat up every particle which was set before them. A festival, somewhat of the same nature, was called the "glutton mass," celebrated in England during, if not after, the reign of Henry IV. A less dangerous, because regulated, term of repletion was prevalent in India, according to a Brahman tradition, in which the invitees, before commencing the carouse, bound themselves around the abdomen with a band of straw; and their modified feat was, not to eat indefinitely until all had been devoured, but only until the straw bands should burst. There is no survival of this custom except in the exaggerated hospitality, generally rustic, in which the host persists in petitions that the guests should continue to eat, without reference to their apparent wishes. Modern etiquette shows marked improvement in never suggesting either selection or quantity of provender.

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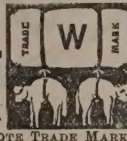
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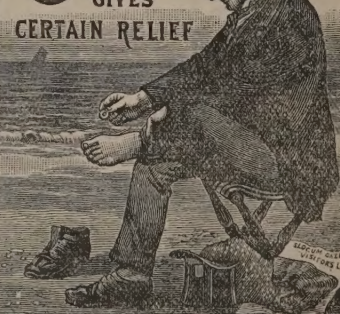
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The conclusion of our dinner raises again the vexed question concerning the retirement of the lady *convives* to leave the men alone. Of course, it is well understood that the object among the hard-drinking Englishmen of the last generation was to permit their sitting for the excessive consumption of wine without the disturbing restraint of the sex. The French, being less addicted to intoxication, and perhaps more professedly attached to the presence of the fair, did not admit this usage. It, however, is a partial survival of the ancient practice, still observed in most savage tribes, in which the women never eat in company with the men. A relic of this is found in the order of Bishop Grosseteste in 1450: "Streytly forbede ye that no wyfe [that is, woman] be at your mete." In this country, and, indeed, now in civilized Europe, there is less addiction to heavy drinking, with a greater desire for smoking after repletion: so a convenient compromise has been effected by which the gentlemen adjourn to a smoking-room, while the ladies segregate themselves for gossip.

It is well to have an agreement as to who is to take the lead in departure, by which the party is broken up. A difficulty of this kind occurred when Dom Pedro, Emperor of Brazil, was a few years ago invited to an entertainment at the White House in Washington. At a late hour, when some of the guests, becoming weary, were about to take their leave of the President's wife, she remonstrated, saying correctly that it was the etiquette for the crowned head to depart first, and all others must await his pleasure. Now, the Emperor had asked the question about our etiquette in this regard of an honest Senator, who was confused about the "receiving party" being always composed of the persons of greatest dignity, and pronounced that Pedro must stay until all not of the household had departed. It was not till about three o'clock in the morning that the dead-lock was broken by the illness, real or pretended, of one of the worn-out ladies.

FISH may be scaled easier by first dipping them into boiling water for a minute.

"ALPINE WINTER IN ITS MEDICAL ASPECTS" (London: J. & A. Churchill), by Dr. A. Tucker Wise, is a book which has reached its fourth edition, and which serves as a full and admirable guide to all details regarding Alpine health resorts, such as Daws, Wiesen, St. Moritz, and the Maloja. We have alluded on previous occasions to the wealth of information supplied by Dr. Wise to those intending to winter in the Alps. It only remains for us to add that the present edition contains increased information, and excels its predecessors in value as a guide to the resorts just named. No visitor to the Alps in winter can afford to leave England without possessing a copy of Dr. Wise's book.

MAGAZINES FOR NOVEMBER.—*Harper's Magazine* is, as usual, a bright and attractive number. Mr. Black's "In Far Lochaber" is concluded in this part, which is also notable for articles on "The Lower St. Lawrence," "Boats on the Tagus," and "Invalidism as a Fine Art." *The Housewife* is full of interesting matter relating to domestic economy; and *Babyhood* teems with wise counsel to mothers and nurses. *Public Health*, now in its seventh number, presents sanitarians with a useful review of all that is new and stirring in hygiene. Messrs. Cassell's *History of England and Countries of the World* continue their successful serial career. Mr. Heath's magazine, *Illustrations*, is full of admirable articles and engravings, and is a wonderful threepennyworth of literature and art.

The Family Circle

"The child is father of the man."—*Wordsworth*.
"In bringing up a child, think of its old age."—*Joubert*.

MILK FOR INFANTS.

BY FREDERICK M. WARNER, M.D.

*Visiting Physician to Outdoor Department of Bellevue Hospital
(Diseases of Children), New York.*

A PROBLEM which occurs to every general practitioner to solve, with greater or less frequency, is the successful rearing of children which have been, from some cause or other, deprived of the maternal nourishment; to this end various foods have been devised—some good, others bad, and all expensive.

After experimentation with, and trial of, most of these, I have come back to cow's milk, properly prepared, as the best substitute at our command.

This summer the bottle-fed children under my care have, with the exception of an occasional slight diarrhoea, done uniformly well, and this has tested, to my complete satisfaction, the method employed to render their food digestible and aseptic.

Since the publication of Dr. Jeffries' interesting article, I have caused the milk consumed by all my artificially-reared children to be prepared in the following manner: Into an ordinary cooking steamer, which can be bought at any hardware store, a couple of inches of water is put and brought to the boiling point; the milk which is the infant's allowance for the next twenty-four hours is placed in as many nursing bottles as are used during that length of time. These bottles, having been previously placed in an oven for a quarter of an hour, are now stoppered with cotton wool, and put on the perforated plate in the steamer, not touching each other, the cover shut tightly down, and the whole allowed to steam for half an hour.

As will be readily seen, by this method all germs are destroyed, and, if the milk is left stoppered and in a cool place, it will keep a long time. In the course of some experiments which I have been making, I find that, to-day, milk which was steamed exactly five weeks ago is perfectly sweet and good.

When feeding time comes, the woollen cork is removed and lime water and sugar of milk are added. A nipple taken out of boiling water is put on, the bottle warmed, and the child's food is ready for administration.

Until six weeks old, the proportions of lime water and milk are half and half, with a teaspoonful of sugar of milk. About three ounces of this mixture will be taken every two hours; from six weeks to three months, one-third lime water, and from this time gradually diminish the amount. I prefer using the ordinary cooking steamer to the somewhat elaborate and costly apparatus of Soxhlet for the sterilization of milk, for the reason that it is inexpensive, easily kept clean, and does not bewilder the over-taxed mother or nurse with elaboration of detail.

In closing, I wish merely to emphasize the fact that a bottle must be used but once; immediately after the child has taken all it will, the remainder of its contents must be thrown away, the bottle washed, and placed in the sun and air.

SMITH (deaf)—"What's the matter, Jones?" Jones—"I've got the headache." Smith (who mistakes it for toothache)—"Why don't you have it filled?"

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—Charles Mackay.

SOME UNUSUAL DEVELOPMENTS IN MAN.

By FRANCIS J. SHEPHERD, M.D.

(Concluded.)

CIRCULATORY SYSTEM.—Every naturalist now admits that the various stages of development of an animal, as well as its specialized parts, are often found to correspond with permanent conditions of animals lower in the scale. A good illustration of this is seen in the development of the human heart and blood-vessels. In the early stages of development we have a heart with a single cavity, connected with a vessel at each end, as in ascidians. Later on, the blood-vessels consist of a series of arches, which go to the gills or branchial clefts, as in fishes and amphibia, while the heart consists of two chambers separated by valves, and is placed far forward in the neck. The gill-arches now partly disappear, and, though the circulation still remains single as in reptiles, the heart-cavities are beginning to be separated into two distinct systems. Soon a double circulation is acquired by a complete separation of the heart into right and left. The right heart propels the venous and the left the arterial blood. At this period the condition is identical with that of birds; at last the true mammalian type of heart and blood-vessels develops and remains permanent. The arrangement of the great blood-vessels going to and from the heart varies considerably in different mammals. In man the rule is for the great artery carrying the blood from the heart to the general system, to give off three main branches, named the innominate, left carotid, and left subclavian (see Fig. 5). These are distributed to the head and the two arms. The main vessel or aorta curves downward and distributes blood to the trunk and lower extremities. These branches are now

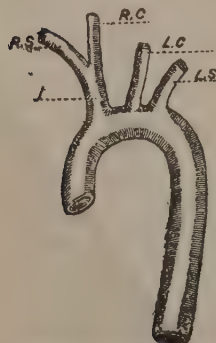


FIG. 5.—NORMAL AORTIC ARCH IN MAN. R. C., L. C., right and left carotid arteries going to the head; R. S., L. S., right and left subclavian arteries going to the arms; I., innominate artery.

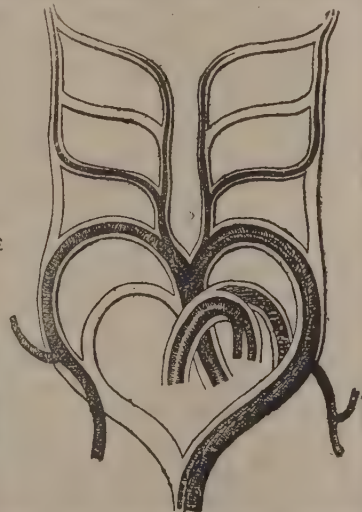


FIG. 6.—GILL ARCHES—the dark lines show the ones which normally persist in man.

known to be derived from certain of the original gill-arches which persist (see Fig. 6), and when any

variation in their arrangement takes place, it always occurs in the line of some of these gill-arches; that is, some of the arches persist which usually are obliterated. Nearly all the variations occurring in these large vessels in man are found to be the regular condition in animals lower in the scale; for instance, sometimes only two branches are given off instead of three; each of these, again, dividing into two, one for the head and one for the arm of that side (see Fig. 7, B). This is the usual arrangement in the bat, porpoise, and dolphin. The commonest variation of the aortic arch is where the innominate gives off the left carotid, and so supplies both sides of the head (see Fig. 7, A), the artery supplying the left arm coming off as usual. This is the normal condition in apes, bears, dogs, and all the feline tribe. In some rare cases in man one branch only comes off from the aortic arch, and this, again, divides into the various arteries supplying the head and arms. In horses and other solipeds, we see this form of aortic arch (see Fig. 7, D). Again, the branches may all be given off separately from the arch, as is the arrangement in the walrus (see Fig. 7, C).

I have three times met with rather a rare anomaly of the great veins going to the heart from the upper part of

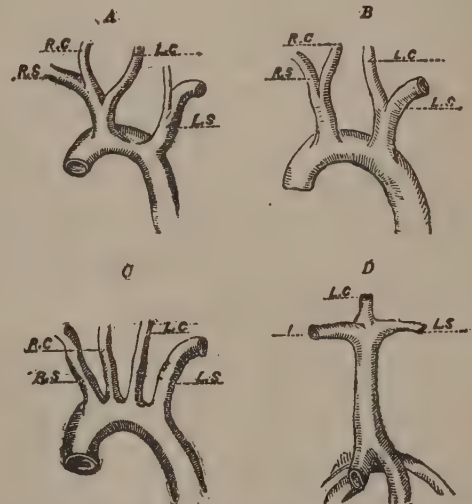


FIG. 7.—R. C., L. C., carotid arteries going to the head; R. S., L. S., subclavian arteries going to the arms; I., innominate artery.

the body. The usual arrangement in man, on each side, is for the great vein of one arm and the corresponding side of the head to unite and form a single trunk (brachio-cephalic), so we have two large venous trunks, one on each side; these two trunks then join to form a single large vessel—called the superior vena cava—which empties its blood into the right side of the heart (see Fig. 8, A). It occasionally happens that the great venous trunks formed by the veins of the arm and head of each side do not unite to form the superior vena cava, but each continues its downward course and opens separately into the heart (see Fig. 8, B). On studying the development of the blood-vessels, we find that in early fetal life this condition of affairs exists, but after a time a transverse branch forms between the two trunks. This branch gradually enlarges, while the left trunk shrivels up, and at birth is only represented by a fibrous cord. This anomaly of the veins we find, then, is a persistence of a usually transient fetal condition in man, and also that in all birds and many of the lower mammals it is the permanent condition.

MUSCULAR SYSTEM.—The muscular system of man is liable to many variations, nearly all of which are interesting from a morphological point of view.

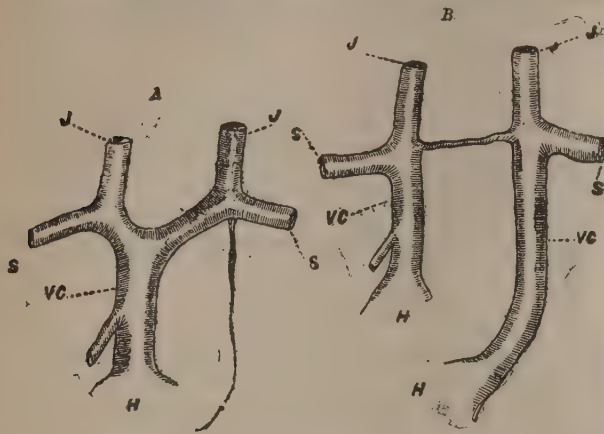


FIG. 8.—A, NORMAL ARRANGEMENT; B, ABNORMAL ARRANGEMENT. J. J., jugular veins from head; S. S., subclavian veins from arms; V. C., vena cava; H., heart.

It is not uncommon to find in man useless rudiments of muscles which exist in a well-developed state in some of our more humble fellow-creatures, and in them serve a definite purpose.

In man the "skin-muscles" are very feebly developed compared with those seen in many of the lower animals. The only remnants of these in man are: the muscle which wrinkles the forehead (*occipito-frontalis*), the muscle immediately under the skin covering the side of the neck (*platysma myoides*), and the *palmaris brevis*, a little bundle of muscular fibres in the palm of the hand; not unfrequently remnants appear abnormally in other situations, as over the breast (see Fig. 9), in the arm-pit, on the back, &c. The skin-muscles are well developed in those of the mammalia which have loose skins, as, for example, the hedgehog, porcupine, and porpoise. In

the hedgehog, when the skin-muscles contract, the animal becomes rolled up as in a bag of muscles. The sportive gambols of a school of porpoises are effected by an abundant supply of these skin-muscles; in the horse the skin-muscle is called the *panniculus carnosus*, and everyone who has seen a horse twitching its skin to get rid of troublesome flies will easily understand how serviceable it is to that animal.

In all human beings there is a small muscle going from a hooked process (*coracoid*) on the upper end of the shoulder-blade to the inner side of the arm-bone about the junction of its upper and middle third. Sometimes this muscle is continued down to the lower end of the arm-bone; or, again, it may be quite short, and attached to the bag of fibrous tissue covering the shoulder-joint. On referring to the anatomy of the lower animals, it is found that both these varieties exist normally, but in a much more highly developed state; they are especially well seen in animals which use their fore-limbs for digging, climbing, or swimming. In them the muscle is of large size, and reaches to the inner edge of the lower extremity of the arm-bone; in man, when it reaches thus far, it is only rudimentary, and of no use.

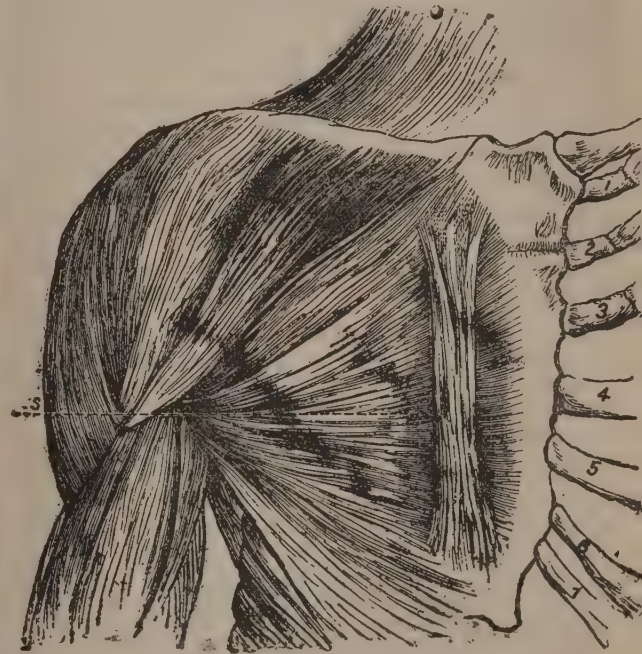


FIG. 9.—S, rectus sternalis or skin muscle, superficial to the great pectoral muscle of chest.

Another muscle which I have seen in about three per cent. of human subjects is a small one which goes from the breastbone to the upper end of the shoulder-blade. This muscle is well developed in animals which have no collar-bones; it reaches its highest development in the horse, pig, hippopotamus, and elephant. It is also seen in the Guinea-pig, Norway rat, and wombat. It is quite rudimentary when it exists in man, and serves no useful purpose.

In man, near the elbow-joint, and lying close together, are two muscles going from the upper to the lower arm; one in front (*brachialis anticus*) which helps to bend the elbow, and the other to the outer side (*supinator longus*) which supinates or twists the fore-arm outward. As a rule, these muscles are quite distinct, though they lie side by side; but in about one per cent. of cases they

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are joined together by muscular fibres. This is the normal arrangement in apes and monkeys, the union of these two muscles aiding them greatly in twisting their bodies when hanging by their fore-limbs to the branches of trees. Again, in apes, the muscle forming the posterior fold of the arm-pit is always prolonged down to the prominence on the back of the elbow. In the long-armed apes this muscle is especially well-developed, and serves to swing the whole arm rapidly and powerfully forward—a movement which is of the greatest importance for dexterously grasping remote branches while in the act of climbing. The same prolongation of this muscle is occasionally seen in man, though in a much less developed state, and serves to remind him of the arboreal habits of some of his not very remote ancestors.

In the gorilla, orang, and chimpanzee a muscle, called the elevator of the collar-bone (*levator claviculæ*), is always present; this goes from the upper neck-bones to the collar-bone. It is found in about three per cent. of human subjects. Other muscles, occasionally found in man in a rudimentary and fragmentary condition, are ones going from the back of the head to the collar-bone or shoulder-blade; they are well developed in many of the carnivora and ruminants. I have seen them of large size in the lion, deer, &c.; in those animals they are much used in pulling forward the shoulder.

In about every other human subject is a small muscle going from a bony spur on the front of the haunch-bones to the muscles in the anterior wall of the abdomen. This is the rudiment of the great muscle in the kangaroo, opossum, and other marsupial animals, which supports the pouch where the immature young are carried, and the bony spur is the rudiment of a distinct bone, called the marsupial bone, which always exists in these animals, and gives attachment to the muscles which open and shut the pouch.

In man the short muscle of the foot which bends the toes is attached to the heel-bone; but occasionally the portion going to the fourth and fifth toes is separated from the portion going to the second and third toes, and is attached, not to the heel-bone, but to the tendon of the long flexor of the toes. In the gorilla only one slip of this short flexor arises from the long flexor of the toes, but in apes we have as a normal condition the arrangement I have endeavoured to describe as that occasionally seen in man.

The brain of man is distinguished from that of the gorilla and the higher apes by having a greater relative size and being more complex. The different fissures are not so continuous, and are frequently bridged over by brain-matter. In the brains of criminals, the lower races of mankind, and idiots, according to Benedict, the fissures are very confluent in character, and in some the first frontal convolution is divided into two portions, as in apes. In animals lower in the scale than man, the little brain or cerebellum is more or less uncovered by the posterior lobes of the cerebrum or large brain. This uncovered condition of the cerebellum was well seen in an idiot's brain that I lately had the privilege of examining; the fissures were also of the confluent type; the whole brain only weighed sixteen ounces. The internal organs in man, although not subject to great variations, still are sometimes found abnormal. The liver may be divided into a number of lobes, as is seen in the gorilla. This is called a degraded liver. The spleen is often deeply notched and multiple, as is the case in some of the lower animals, and the uterus is occasionally double; an arrangement which is the normal one in the mare,

raccoon, rabbit, and other animals. It is double in the human fetus up to the fourth month, and frequently a trace of this bifid condition is seen in adult life.

I could multiply, *ad infinitum*, the variations in human anatomy which have their corresponding normal condition in the lower animals, but I think I have described a sufficient number of examples to show how common these animal resemblances are in man. On what theory can we account for their existence, except that they are reversions to some pre-existing and lower type? This is the only logical conclusion to which the study of morphology leads us, and "to take any other view," says Darwin, "is to admit that our own structure and that of all the animals around us is a mere snare laid to entrap our judgment."—*Popular Science Monthly*.

ROWNTREE'S ELECT EXTRACT OF COCOA.—In our notice of this Cocoa Extract in last week's *HEALTH*, we remarked that a half-pound tin serves for the making of fifty cups of cocoa. The number of cups, we find, has been understated. Sixty cups, and, according to the care with which the Extract is used, even more, may be made with a half-pound tin.

ONE of the annoyances connected with the use of instruments containing lenses, in the examination of the cavities of the body, is due to the fact that they become dim by the deposition of moisture. Dr. Stocquart claims that this can be prevented by spreading a drop of glycerine on the lens.

INOCULATION FOR CHOLERA.—On Monday a paper, by Dr. Gamaleia, of Odessa, on the cure of cholera by inoculation, was read to the Paris Academy of Sciences by M. Pasteur. The following information on the subject is given by the Paris correspondent of the *Times*. It appears that in 1886 Dr. Gamaleia came to Paris as delegate of the Odessa doctors, and studied the Pasteur method, with which he made himself thoroughly acquainted. On his return to Russia, various institutions were founded, under his care, for the cure of hydrophobia, which have proved very valuable. Five years ago, M. Pasteur endeavoured to discover a means of curing cholera by inoculation. At his request, a mission was sent by the French Government to Alexandria while cholera prevailed there, to study the subject. Dr. Lhuiller, one of the mission, died of cholera, and M. Pasteur did not press the continuance of the investigations. The subject, however, was taken up by Dr. Gamaleia, who has discovered a method similar to that of M. Pasteur, by which it is believed cholera can be cured by the inoculation of the cholera virus. As yet, experiments have only been made on animals, but no doubt is entertained that it will be possible to apply, in a short time, the same process to man. After reading the paper, M. Pasteur stated that Dr. Gamaleia had expressed his readiness to repeat the experiments at Paris in presence of a committee of the Academy of Sciences, and to try on himself the inoffensive and sufficient dose for human vaccination. He is ready to undertake a journey into countries where cholera prevails to prove the efficacy of his method. M. Pasteur added that he need scarcely say that he accepted with the greatest satisfaction the offer made by Dr. Gamaleia to conduct the experiments in his laboratory. The letter was referred to the committee, which has a prize of 100,000 francs in its hands for a cure for cholera, and it was arranged that the experiments should be postponed till November.

POISON IN THE ASHES.

MANY people believe that Nature has somewhere a remedy for every disease. So many and so terrible are the ills of life, and so slight the pleasure we get as time flies past, that such a belief is the least faith we can show in a gracious and all-wise Providence. A few remedies—but, alas, how few!—have been found. Others, so far, lie hidden from human inquiry. Occasionally death follows quickly on the heels of the evil—an illustration of the dangerous character of the ailment to be relieved:—

For example, Nervous Dyspepsia is a comparatively *new* disease, growing out of the conditions of modern life. It is a joint affection of the digestive organs and of the nervous system. These two were formerly treated as separate ailments, and it was left for the clear-sighted thinkers to prove that the basis of this terrible and often fatal complication lies chiefly in the disordered and depraved functions of digestion and nutrition. They reasoned thus: "If we can induce the stomach to do its work, and stimulate the excretive organs to drive out of the body the poisonous waste matters which remain after the life-giving elements of the food have been absorbed, we shall have conquered Nervous Dyspepsia and Nervous Exhaustion." And they were right. Knowing the infallible power of Mother Seigel's Curative Syrup in less complicated though similar diseases, they resolved to test it fully in this. To leave no ground for doubt, they prescribed the remedy in hundreds of cases which had been pronounced incurable—with perfect success in every instance where their directions as to living and diet were scrupulously followed. Nervous Dyspepsia and Exhaustion may almost be called a peculiarly English disease. To a greater

or less extent half the people of this country suffer from it—both sexes and all ages. In no country in the world are there so many insane asylums filled to overcrowding, all resulting from this alarming disease. Its leading symptoms are these; frequent or continual headache; a dull pain at the base of the brain; bad breath; nauseous eructations; the rising of sour and pungent fluids to the throat; a sense of oppression and faintness at the pit of the stomach; flatulence; wakefulness and loss of sleep; disgust with food even when weak from the need of it; sticky or slimy matter on the teeth or in the mouth, especially on rising in the morning; furred and coated tongue, dull eyes; cold hands and feet; constipation; dry or rough skin; inability to fix the mind on any labour calling for continuous attention; and oppressive and sad forebodings and fear.

All this terrible group Mother Seigel's Curative Syrup removes by its positive, powerful, direct, yet painless and gentle action upon the functions of digestion and assimilation. Those elements of the food that build up and strengthen the system are sent upon their mission, while all waste matters (the ashes of life's fire), which, unremoved, poison and kill, are expelled from the body through the bowels, kidneys, and skin. The weak and prostrated nerves are quieted, toned, and fed by the purified blood. As the result, health with its enjoyments, blessings, and power, returns to the sufferer, who had, perhaps, abandoned all hope of ever seeing another well day.

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SEWER-GAS POISONING.

By HENRY HUN, M.D.,

Professor of Diseases of the Nervous System, and of Psychological Medicine, Albany Medical College.

SECOND PAPER.

IN the foregoing four cases, described in our last article, the sewer-gas poisoning caused only a temporary gastro-intestinal disturbance, which was accompanied and followed by a prostration of short duration, but in the following case the subsequent prostration continued a long time:—

CASE V.—Mr. P., aged 18, was present when a very foul privy-vault, which had been unused and covered up for many years, was opened. He was immediately seized with faintness, and with severe vomiting and purging. Afterward he was extremely prostrated, and for five or six years he was an invalid, unfit for any physical or mental effort. He was very weak, and appeared to be in a condition of general debility without presenting any evidence of organic disease.

The following case is interesting in many respects:—

CASE VI.—Miss S., aged 40. An iron ventilating pipe of light weight ran up in the wall of her bedroom from the drain to the roof. The joints of this pipe were found, on examination, to be open, and the peppermint test gave a strong odour of peppermint in the room. Miss S. had occupied this room less than a year when she had an attack of acute Bright's disease, œdema of lungs, and general œdema, vomiting, diarrhœa, &c., abundance of casts, and a large amount of albumen in the urine. She was taken to the hospital, and made a good recovery. After a few months she returned to this same room, and during the next ten years had no return of the Bright's disease, but suffered from frequent attacks of complete loss of appetite, great prostration and wretchedness, vomiting, diarrhœa, coated tongue, and headache. On several of these occasions the urine was examined, and was found to be free from albumen and casts. Each attack lasted from one to three weeks, and she had eight or nine such attacks each year. A year ago she had three severe attacks of facial erysipelas; she was scarcely over one attack a fortnight before she had another, and it was these attacks of erysipelas which led to an examination of the plumbing. The defective pipe was replaced by a thicker one properly leaded, and Miss S. has enjoyed good health ever since.

In this case the escaping sewer-gas caused a succession of attacks of gastro-intestinal catarrh during ten years, at the end of which time the specific micrococcus of erysipelas probably got into this particular drain and, escaping into the room, caused the succession of attacks of erysipelas, and both these kinds of attacks promptly ceased when the leak in the pipe was stopped. The question naturally arises whether the attack of acute Bright's disease, with which this series of diseases commenced, was not also the result of sewer-gas poisoning. The following cases, it seems to me, make it extremely probable that it is so:—

CASES VII. & VIII.—Dr. P., aged 65. Connected with the bedroom in which he and his wife sleep, is a little room in which there is a water-closet, which they never use in the winter time and only rarely in the summer; so that the closet is rarely flushed, and it is

certain that the trap often dries out. The soil pipe of the water closet runs to an hermetically sealed cesspool. At times a bad odour is noticed about this closet. In the early part of the winter his wife was attacked by a low form of fever, which was followed by an attack of acute Bright's disease (general œdema, albumen and casts in the urine), from which she completely recovered. During his wife's illness, Dr. P. began to complain of general weakness, numbness of extremities, dyspnœa, palpitation, insomnia, pain in the occiput, failing eyesight, and confusion of mind. These symptoms have continued up to the present time. Micturition is frequent. Urine is abundant, and contains a small amount of albumen and many finely granular casts of small calibre. Otherwise, physical examination is negative except for a high arterial tension.

The occurrence of Bright's disease almost simultaneously in the wife and husband makes it probable that there is some local cause for the disease, and taken in connection with the case of Miss S., renders it very probable that this local cause is sewer-gas, and this probability is strengthened by the seven cases which follow.

CASES IX & X.—Mr. K. aged 68. Connected with his bedroom was a bathroom, the plumbing of which was in very bad condition, allowing a free escape of sewer-gas; and, under the basement floor, the house drain was broken, and a large pool of sewage had gradually formed, into which a workman, who unsuspectingly walked over it, sank to his knees. Mr. K. came to the office on May 8th complaining of great weakness, dyspnœa on exertion, and looked haggard and miserable. At that time his urine contained no albumen, and the next night his dyspnœa became orthopnœa, he had complete anorexia, he developed general œdema and œdema of the lungs, and his urine became scanty, and contained a large quantity of albumen together with hyaline and granular casts. On May 17th he became delirious, then comatose, and died on May 20th, twelve days after he first came to the office for medical advice. His wife soon afterward began to present the same symptoms—dyspnœa, prostration, haggard face, &c. It was then suspected that the plumbing was in bad order, and an examination revealed the condition of things described above. Mrs. K. was removed to a room entirely unconnected with the plumbing, and made a rapid and complete recovery.

CASE XI.—Mrs. G., aged 56. In March she had an attack of indigestion, at which time her urine was examined and found to contain no albumen. On the following May she moved into another house, and after that time she did not feel well, and about the middle of July an attack of acute Bright's disease was ushered in by a chill, vomiting and diarrhœa. The urine contained one-eighth per cent. of albumen and numerous hyaline and finely granular casts of small calibre. During the first few days of her sickness she had numerous chills and a low form of fever, the temperature not rising above 101 degs.; and, during the whole sickness, she was extremely prostrated, so that she could not raise herself up in bed; she also had absolute anorexia and a profuse diarrhœa. An examination of the house revealed numerous leaks in the soil-pipes, one hole being two inches square, through which there was a free escape of sewer-gas. The plumbing was repaired, and as soon as it was possible, Mrs. G. was removed to another house. The albumen had disappeared from the urine by the end of July, and on August 20 she was able to walk out in the street, although she did not recover her strength for several months.

CASE XII.—Mr. C., aged 60, as a contractor, worked

for a long time at a very foul sewer. Before he had finished working at it he was seized with weakness, dyspnœa, and œdema, and an examination of his urine showed one-sixth per cent. of albumen, and numerous hyaline and granular casts. He continued to present the symptoms of chronic Bright's disease, and died, after a sickness of less than a year, from uræmic poisoning.

CASE XIII.—Mr. H., aged 75. About a year and a half ago he moved his office, where he worked more than ten hours a day, to a room which was heated by hot air, which was contaminated by sewer-gas, so that when the room was shut up for a few days the air became extremely offensive. At the time of moving into this office Mr. H. was an unusually vigorous man for his age. A month or two later he began to be troubled by diarrhœa and frequent micturition. To these symptoms were added dyspnœa, palpitation, sweating, frontal headache, and failing eyesight. The dyspnœa then became orthopnœa and œdema of the legs appeared. The pulse was quick, irregular, and intermittent. The heart's action was violent and irregular; the area of cardiac dulness was increased, but no murmurs could be heard. The urine contained one-eighth per cent. of albumen, and a few hyaline casts. Mr. H. is still living. He has dropsy and much œdema, and a very irregular and laboured action of the heart.

CASE XIV.—Mr. X., aged 55, went to work in an office in which there was a stationary wash-stand, the soil-pipe of which was untrapped, and allowed a free escape of sewer-gas. The previous occupant of this office died, and his death certificate reads fatty degeneration of the heart, although he was said to have Bright's disease also. Mr. X. soon after commencing work in this office began to be troubled by dyspnœa on exertion, headache, and general weakness. Dyspnœa and weakness became extreme, and about a year after commencing work in this office he was suddenly seized with a right-sided hemiplegia, followed in a few hours by coma of short duration. At that time the urine was examined and found to contain one-sixth per cent. of albumen, and hyaline and finely granular casts. The pulse was irregular and intermittent; the heart's action violent and laboured; area of cardiac dulness was increased; no murmurs; arterial tension high. He left his office and travelled about and improved slowly and steadily. His urine was last examined six months ago, at which time it still contained albumen and casts. His heart's action continued laboured and he was feeble. Since that time he has continued to improve in strength.

CASE XV.—Mr. S., aged 50. In the cellar of his store, in which he spent most of his time, there was a large opening into the drain. In the middle of the winter he began to be troubled by dyspnœa and general weakness. Pulse was rapid and feeble; heart's action extremely laboured; urine contained a large amount of albumen (three-quarter per cent.) and hyaline and finely granular casts. He developed ascites and general œdema, and a secondary pleuritis and pericarditis, and finally died from exhaustion.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour, little care."—*Sir Philip Sydney.*

"Women who go to College."—Under this title, Arthur Gilman writes in the *Century*: "I have been told, even in cultivated, intellectual circles, that a young woman had better be in the kitchen or laundry than in the laboratory or classroom of a college, 'who should be trained,' such persons say, 'to be wives and mothers.' The finger of scorn has been lightly pointed at the mentally cultivated mothers and daughters who are unable to cook and scrub, who cannot make a mince pie or a plum-pudding. Such persons forget with surprising facility all the cases of women who neglect the kitchen to indulge in the love-sick sentimentality to which they have been trained; who think too much of possible matrimonial chances to endanger them by scrubbing, or by giving ground for the suspicion that they cultivate any other faculty than the power to apostrophize the moonlight and to long for a lover. They do not care to remember that it is no whit better to wither under the influence of ignorance or sentiment, to cultivate a fondness for 'gush,' than to dry up the sensibilities like a bookworm, or grow rigid and priggish as a pedant. It is as bad to stunt human nature as to over-stimulate it—to stop its progress in one way as in another. The danger is in going to extremes. The mass of men choose the golden mean, and we may trust woman to avoid extravagance in the pursuit of learning. We may and ought to give her every help in the direction of life that her brothers possess. It is no longer doubtful, it is plain, that whatever other rights woman should have, those of the intellectual kingdom ought to be hers fully and freely. She should be the judge herself of how far she should go in exploring the mysteries of nature and of science."

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Back from the Holidays.—One of the most frequent errors has already been glanced at—viz., the mischief of attempting too much, especially in the way of physical effort, or, in popular phrase, the unwisdom of "making a toil of a pleasure." This is a mistake even for the young and vigorous, but it is doubly so for those whose years are advancing, or who have any weak vital organ. The opposite error may easily be made, and the desire to secure a restful holiday may end in obtaining one that is intolerably dull. Children can spend week after week at the seaside, bathing, boating, roaming over the sands, and collecting hosts of heterogeneous curiosities; but such a holiday would almost infallibly prove irksome to the professional man, whose mind could not by these simple means succeed in finding the necessary release from its usual channels of thought. It is from this point of view that we see the wisdom of our continental neighbours in developing their holiday resorts with all the accessories of art, and combining so many things to catch the eye and charm the ear as helps to a rest that will not degenerate into *ennui*. Music is one of the prime aids to this end, and the well-appointed band should be a necessary element at every popular resort. It will be a satisfaction to the holiday-maker if, after the pleasures of the moment are over, he can reflect that in his hours of idleness he has added to his stores of information, and acquired experience that may be pleasurable and profitable to him hereafter. Hence it is in most cases desirable that he should not, year after year, make the same

The preservation of forests from the depredations of insects and aphides is largely dependent upon the spiders that inhabit them, more effective work of this kind being performed by them than by the insect-eating birds. Examinations of the viscera of the spiders kept in captivity show them to be voracious destroyers of these creatures, and as they prefer dark spots in the forests, which are the places most infested by vermin, the results of their labour are very beneficial.

stereotyped trip to his favourite watering-place, or follow the beaten round of the well-known continental tour. Variety is both more recreative physically and productive of more intellectual interest and advantage. Happily, it is easily obtained. Our coasts swarm with well-appointed watering-places, and hardly a year passes that some new region is not opened up abroad for those who are weary of the trite and familiar haunts. Norway and Spain have of late years become accessible through improvements in railway, steamer, and hotel; while Morocco, Algeria, and the Canary Islands have all begun to offer great attractions to those who wish to travel after the usual summer and autumn season has passed by. The traveller should rely as little as possible on books, and as much as possible on observation and personal contact with men and things. The holiday is no time for study, but it is the time *par excellence* for learning many things that the eye alone can teach. The annual rest will have afforded one of its highest ends if it be the means of starting the mind upon some new and fruitful line of thought and inquiry. Many a distinguished biologist can trace his first genuine taste for botany or zoology to some observations upon plants or animals casually made during the hours of weakness and enforced rest. The world teems with wonders, but the sense require training and directing before it becomes conscious of them. These wonders may well engage our attention when the daily strain is withdrawn, and our minds are receptive to influences to which at other times the cares of the day almost inevitably render us oblivious.—*Lancet*.

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Trained and Untrained.—As the division of labour in civilized life becomes greater, there is an ever-increasing pressure upon individual men and women, and a growing necessity that everyone should be trained for the special duties and responsibilities that he will have to undertake in the business of life. The objects of training are not only to prepare the man to do his work well, and with profit to himself, but also to prepare his body and brain for the strains that will be made upon it by the pressure of active life, rendering it apt for the work, full of power and resource, strong, and not easily broken down by temporary trials, adverse circumstances, or over-pressure. These remarks apply equally to students in our own profession, to teachers, and to men of business; the man fitted for his work, and well trained to perform it, does not commonly become so easily exhausted by fatigue in his particular line of employment as another who has not been trained. The difference between the trained and the untrained is not or should not be a mere difference in technical learning, but a real difference in the man, producing a physiological change in him, strengthening the faculties he will be called upon to exercise hereafter. Such training is not always given by education, it is not always aimed at; but the principle we put forward has been tried by experience in the practical affairs of life, and it would be well if it were clearly understood by those who as guardians and teachers have to prepare the young for a career. We recently had our attention called to the case of a female teacher in a Board school, whose health had broken down at her work, so that she was admitted to the hospital in a semi-cataleptic condition, from which she recovered completely after a few weeks' rest. There were no signs of disease, but the girl had undertaken duties in school for which she had neither natural aptness nor special training. The same thing is often seen with the young man in business; he leaves school, where he has worked indifferently at his lessons, and on entering the office is

obliged to work hard at duties that are strange to him, so that in a few weeks he becomes fatigued and then exhausted by an amount of work which those accustomed to the office routine are trained to bear without difficulty. For such reasons it is a true line of policy to train, during their educational career, those who are delicate in structure or balance of brain, or suffer from neuroses, in order that in after-life their strength may be adequate to bear the labours and the strains which would break down the nerve-system of any untrained man. It is a great aid to a training for special work when the man is able to acquire a command of some source of recreation such as music, some branch of literature, carpentry, or athletics, something that will give the brain a different set of impressions from those received in the routine life. Training, properly conducted so as to develop all the faculties, and specially those that will be most called upon in the business of life, is the best means of guarding against failure of mental and physical power.—*British Medical Journal*.

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Doctors should Write Plainly.—The *Medical Register* (Philadelphia), under the heading of "One of the Lost Arts," takes the doctors to task for not writing their prescriptions more intelligibly. The writer claims that the druggist is liable to, and frequently does, make mistakes from misinterpreting the writing, and that the life of the patient is imperilled by their wretched chirography. The ordinary prescription is often as undecipherable as Egyptian hieroglyphics written upon papyrus of three thousand years ago, and what is worse, there does not seem to be any tendency towards improvement: the modern belief being that bad penmanship is an evidence of genius. The result is that the patients do not get the medicines ordered by the physician, or that which the physician supposes he orders. Some years ago, the writer formed the acquaintance of a druggist who said that he did not pretend to follow the prescriptions sent him, because in many instances it would be unsafe for the patient to take the dose, and frequently the chirography was so miserable that it was impossible to make out just what the doctor wanted. He was consequently compelled to treat the patients himself, although to all appearances they were under the care of the regular physician. This plan was adopted after due deliberation and trial, the druggist finding that when prescriptions were returned for correction that was generally the end of the business, the prescriptions being sent elsewhere. Let us call a halt upon this failing, as it is due largely to sheer negligence; and when the writing becomes too burdensome by reason of lack of time, it would be the part of wisdom to employ a competent clerk for the purpose. By this means it is hoped that we may be able to revive, if not rediscover, one of the lost arts. It will be better for the patient and, furthermore, will cause the druggist no sleepless nights such as now threaten to drive him to distraction.

DEAFNESS CAUSED BY THE ELECTRIC LIGHT.—A curious phenomenon was recently related by M. d'Arsonval before the French Academy of Medicine. After gazing for a few seconds on an arc light of intense brilliancy, he suddenly became deaf, and remained so for nearly an hour and a half. Surprised and somewhat alarmed in the first instance, but reassured by the disappearance of the symptoms, he repeated the experiment with the same result. When only one eye was exposed to the light no very marked effect was produced.

"ELECTRICITY IS LIFE."

(TRADE MARK.)

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WORLD-FAMED
GALVANIC BELTS,

FOR the CURE of NERVOUS DISEASES.

HAVE RECEIVED TESTIMONIALS from

THREE PHYSICIANS to

HER MAJESTY the QUEEN,

THE ACADEMIE DE MÉDECINE of Paris and

FORTY MEMBERS of the

ROYAL COLLEGE of PHYSICIANS of LONDON.

RECENT TESTIMONIALS.

GALVANISM v. NERVOUS EXHAUSTION.

St. Peter-street, Ipswich, October 29th, 1888.

Dear Mr. Pulvermacher,—I have just received a very gratifying letter from a lady patient who, under my advice, adopted your treatment. For years past this lady has devoted her life to the management of a large orphanage, but owing to the severe mental strain and anxiety connected with it her health quite broke down, and she was unable to attend to her duties.

She now writes to me: "I am truly thankful to tell, and I know you will be glad to hear, that I have derived great benefit from the Pulvermacher Belts you sent me, so much so that I have been able to take up my full work again, and even to add to it, by the opening of a new branch home for the children."—Yours very sincerely,

ROBERT SEAGER.

J. L. Pulvermacher Esq., 194, Regent-street, W.

GALVANISM v. RHEUMATISM.

Fyvie, Aberdeenshire, Oct. 27th, 1888.

Dear Sir,—I want you to send me a Galvanic Belt for a friend, and, with regard to my own case, I must mention that on the arrival of the Combined Band, on Friday, the 12th inst., I had it immediately applied as directed, with the astonishing and comfortable result that the following morning my rheumatism was gone, and I have not felt anything of it since.—Very gratefully yours,

THOMAS GRANT.

Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM v. NERVOUS EXHAUSTION.

Sandy-street, Newry, 25th October, 1888.

Gentlemen,—I am happy to tell you that I am now quite restored to my usual health and strength, thanks to your Galvanic Appliances.—Yours sincerely,

J. TAYLOR.

Messrs. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM v. NERVOUS DEBILITY.

Leeds, 24th October, 1888.

Dear Sir,—I really thank you for your kindness and advice, and I consider myself a living testimony to the value of your Galvanic Appliances.—Yours sincerely,

W. GEORGE.

Mr. Pulvermacher, 194, Regent-street, W.

GALVANISM v. NERVOUS EXHAUSTION.

Newstead Station, Nottingham, 17th Oct., 1888.

Dear Sir,—I am pleased to inform you that through steadily wearing your Appliances, I am now restored to perfect health, and I should have written to you before, but I was away from home.

Thanking you for your kindness in the past,—Yours truly,

THOS. METCALFE.

J. L. Pulvermacher, Esq., 194, Regent-street, W.

GALVANISM v. NERVOUS EXHAUSTION and PAIN in the BACK.

Abercairny, Scotland, 11th October, 1888.

Dear Sir,—I am pleased to inform you that I have steadily improved since I got your Appliances, and the severe pain in my back, which I had for eight or nine months, has entirely disappeared, to my great comfort.

You can give my address to any inquirer, and I shall be only too pleased to testify to the great benefit I have received from your treatment.—Yours truly,

T. H. CRIEFF.

Messrs. J. L. Pulvermacher & Co., 194, Regent-street, W.

GALVANISM v. EXTREME NERVOUS DEBILITY.

Newton Solney, near Burton-on-Trent, October 3rd, 1888.

Dear Sir,—I hope you will excuse me not sending you word sooner of the great benefit I have received in wearing one of your Galvanic Belts.

I was suffering from extreme nervous debility, and could not stand or walk, and for nine months I was quite helpless, but since wearing your Galvanic Belt I have gradually improved, and can now get about, and with the exception of a little nervous twitching, I am wonderfully well.

You may make what use you like of my name and address.—Yours faithfully,

SAML. WARDLE.

Mr. J. L. Pulvermacher, 194, Regent-street, W.

GALVANISM v. NERVOUS EXHAUSTION.

The distressing symptoms of Nervous Exhaustion and Debility are speedily removed by means of PULVERMACHER'S world-famed GALVANIC BELTS, which are so arranged as to convey a powerful electric current direct to the affected parts, gradually stimulating and strengthening all the nerves and muscles, and speedily arresting all symptoms of waste and decay.

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ON FRIDAY, OCTOBER 5th.

IMPORTANT ANNOUNCEMENT.

BONUSES TO SUBSCRIBERS TO "HEALTH."

HEALTH, as our readers are aware, may be obtained of all Booksellers and Newsagents, and at the Railway Book-stalls, on the day of publication. It may also be ordered from the PUBLISHER, 2, PATERNOSTER-SQUARE, London, E.C., who will send the journal, post free, for a year, on receipt of postal orders for 10s. 10d.

As many of our readers who live in remote districts prefer to obtain HEALTH from the Publisher direct, and as we are desirous of increasing the already large number of subscribers who give us a yearly order for the journal, we offer the following FREE GIFTS and BONUSES to all who subscribe to HEALTH for one year or longer:—

(1.) To each Subscriber who remits 10s. 10d. to the Publisher, entitling him (or her) to receive one copy of HEALTH, post free, for one year, we shall present a copy of Dr. Andrew Wilson's work, entitled "A Manual of Health Science" (Longmans & Co.), value 2s. 6d.

(2.) To each subscriber who remits 21s. 8d., entitling him or her to receive two copies of HEALTH weekly, post free, for one year (or one copy for two years), we will present Dr. Richardson's "Ministry of Health" (Chatto & Windus), value 6s. The copies of HEALTH so ordered may be posted to separate addresses.

(3.) To each person who subscribes 32s. 6d., for three copies of HEALTH, post free, weekly, for one year, we will present the volume by Dr. Richardson mentioned above, and also the handsome, illustrated book entitled, "Studies in Life and Sense," by Dr. Andrew Wilson (Chatto & Windus), value 6s.—being a free gift of the total value of 12s.

The bonus last mentioned will also be presented to any one who succeeds in obtaining three yearly subscribers to HEALTH, and who remits to the Publisher the sum of 32s. 6d., together with the names and addresses of the persons to whom the copies are to be posted each week.

As the literary gifts above-mentioned constitute books containing solid and reliable information regarding health and other matters of popular scientific interest, it will be seen that the above scheme, while intended to increase our already large circulation, also offers distinct advantages to new subscribers who guarantee by their subscriptions a year's support to this journal. All communications regarding subscriptions and other purely business details connected with HEALTH should be addressed directly to the PUBLISHER, 2, PATERNOSTER-SQUARE, London, E.C., and not to the Editor.

Our Letter-Box

"Conference [maketh] a ready man."—Bacon.

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. Those intended for the Publishing Office to be sent to MR. A. P. WATT, THE PUBLISHER, at the same address.

LETTERS TO THE EDITOR.

SACCHARIN.

SIR,—The letter on this subject, in your issue for Oct. 26th, must have excited some surprise, being so contradictory to all that has been hitherto said upon saccharin. Saccharin has been strongly recommended as a substitute for sugar for persons suffering from diabetes, and for all those to whom sugar would be injurious, and yet who cannot take their food without sweetening. In consequence, its sale has largely increased, and it may be obtained at every druggist's. As it is above 200 times as sweet as sugar, the quantity required is so small that it is difficult to conceive how it can be injurious. A Burroughs & Wellcome tabloid not so large as a grain of wheat will sweeten a large cup of tea, coffee, or chocolate.

Personal experience, perhaps, cannot weigh much against that of the professional men quoted by your correspondent; but I may say that I have tried saccharin above a year, and have been free from dyspepsia, and one of its concomitants, uric acid, since I have done so. Perhaps others of your readers will favour us with their experience, and it is to be hoped that you will favour the readers of your valuable paper with your views upon the subject. —I am, yours respectfully,

A CONSTANT READER.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

[Readers of HEALTH will kindly note that when back numbers of the journal are desired, the letters containing such requests and stamps for the numbers should be addressed to the PUBLISHER of HEALTH, 2, Paternoster-square, London, E.C., and not to the Editor.]

KANGAROO.—Usually, the south is preferred, and Melbourne has a high reputation; but we advise you to ask the physician in Leeds for definite information regarding the exact place to which you should go.

PARTICK LAD.—Dahl's Cakes should be tried by you. Take them with your breakfast and tea regularly. See advt. in our pages.

B. T. PARROTT.—1. No objections can be taken. 2. The Medical Battery Company, 52, Oxford-street, London, W. 3. No; a proper truss. 4. The tonic recommended you is a good one. Try Seller's Easton Syrup, if not bettered.

CIRCLE.—Twyford's "Unitas" closet is the type we recommended. The mere existence of a "pan" in any closet is a defect, and yours is of extremely antiquated type.

TEDDY BILL.—You should avoid coffee until you are well, and drink Pitkeathly Water (advertised in our pages) regularly for a time. What you name arises from a too acid condition of the secretions, and you will be able to cure this condition by the use of the water referred to. You must also avoid foods containing sugar. If not cured by the advice just given, then try the effect of taking fifteen drops of Fer Bravais twice daily after your meals in a little water. If need be, write again.

A YOUNG LADY.—Short-sightedness would not constitute a serious barrier to your undertaking the duties you name, but we should certainly advise you to delay for some years before finally making up your mind to adopt the profession you mention. You are far too young to decide anything regarding your future.

CHARLES CLIFTON.—1. The habit is not injurious, but only uncomfortable: it renders the throat dry and parched. 2. Yes; there is no better brand than Van Houten's Cocoa, it is in every way a thoroughly nutritious and pure cocoa.

MONDAY.—Your hair-weakness arises from your habit of wetting you head each morning. This is not a natural thing, and is the cause of many hair-troubles. We should advise you to give up the practice you name, and use the application ordered to "Hubert F." in HEALTH, No. 290. Use a soft brush only, and avoid hard combs. Wash the hair once every ten days with Bayley's Spermaceti Soap and tepid water.

A BIBB.—Read the pamphlet, "A Lecture to Young Men" (post free for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W.C.), and note what is therein said about cases like yours.

C. A. M.—1. Vin Mariani is a good tonic in all cases of debility. 2. It agrees better with many persons than the other tonic you name.

GIMP.—Try Dahl's Cakes (advertised in our pages) as a remedy for constipation.

PASTOR.—Apply a little boracic ointment to the parts night and morning, and internally take a teaspoonful of the Syrup of the Hypophosphites after your meals, in a wineglass of water, twice daily.

E. M. M.—1. Certainly; use Bayley's soaps. 2. From 60 degs. to 65 degs.—remember that in the early morning man's temperature lessens.

G. P.—Messrs. Burroughs, Wellcome & Co.'s, Snow-hill-buildings, London, E.C. They are to be had of any good druggist in your city.

LOLA.—If the tonic you are taking now does not suit, try the Vin Mariani (Roberts & Co., Chemists, New Bond-street, London, W.) after meals twice daily.

E. L. F.—See that the child does not take any foods or fluids for at least an hour before bedtime. Give him, twice during the day, four grains or so of citrate of potash in half a tumbler of water, between his meals, and see that no constipation exists. The symptoms you name often arise from the rectal irritation caused by worms.

BLACKAMOR.—Use the following lotion, to be applied with a piece of lint, and allowed to dry on the parts: Powdered calamine (Ver), two drachms; powdered zinc oxide, one drachm; glycerine, one drachm; camphor water, to make up six ounces. Label: "For external use only."

C. P.—Lime water may be made by adding slaked lime, two ounces, to a gallon of water contained in a stoppered jar. Shake the jar for a few minutes, and then allow its contents to settle. After five or six hours the undissolved lime will have fallen to the bottom, and the clear water above may be syphoned off for use. The bottle must be kept well stoppered.

ALICK.—Wash your head once a week with Bayley's Spermaceti Soap (17, Cockspur-street, Pall-mall, London, S.W.) and tepid water, and rub in each alternate morning a little glycerine of borax to the roots. Use a soft brush only; and use, for the nutrition of the hair, simply a little brilliantine.

PETER HAY.—You cannot measure exactly without scales and weights. A very rough-and-ready way of estimating grain-weights is that of considering that five grains weight of a powder will cover a sixpence.

R. Q.—Wash the hair twice or thrice weekly for a time with a pint of hot water (soft) in which a piece of lump ammonia the size of a brazil nut and a slightly larger piece of borax has been dissolved. Allow the fluid to cool and use as a wash.

FOSTER BROTHER.—Try a vegetable dietary—stewed fruits, apples or oranges, &c., and whole-meal bread, with Scott's Oat Flour for supper and breakfast; avoid tea and coffee; take Cascara Cordial, twenty drops in water, between meals, once or twice daily. Sponge with cold water each morning; sleep on a hard mattress; take plenty of open-air exercise, and avoid fluids and suppers late at night.

R. A.—Try the following, and see to the clothing: Ammonio-citrate of iron, a drachm and a half; spirit of sal-volatile, three drachms; chloric ether, one drachm; syrup of tolu, three drachms; camphor julep, seven ounces. Label: "Two table-spoonfuls thrice daily, after meals."

CONE.—Try Dahl's Cakes (advertised in our pages) and take a Cascara Tabloid or two (Messrs. Burroughs, Wellcome & Co.'s). Take Scott's Midlothian Oat Flour in place of tea and coffee night and morning, and you will find this diet cure you. For the rest, take plenty of fruits and vegetables.

MAYPOLE.—Give the Cellular Clothing Company's undergarments a fair trial. See notice of them in a late number of HEALTH. For cycling they are eminently suitable.

GERMAN.—For lunch try Henderson's "Wheatena Biscuits." They are bone-forming and nutritious.

A. E. O.—Consult the French Hygienic Society, 56, Conduit-street, London, W., and use their Pommade Trichophile for the cure of scurf. This society will also be able to advise you regarding the use of a harmless dye for the hair.

NOBO.—For hæmorrhoids, try Bayley's Remedy (17, Cockspur-street, London, S.W.), and continue to avoid constipation by care in diet. Cases like yours improve through the simple means of taking a little castor oil every second day.

F. R.—Drink Pitkeathly Water regularly, avoid all alcohol for a time, and rest and sleep with the feet raised. Apply a little Woolley's Powder to the part, and take fifteen drops Fer Bravais, after meals, thrice daily.

A. PARLOUR.—The Xylonite Truss, made by the Medical Battery Company, 52, Oxford-street, W., is an appliance which will suit you. Call there and be fitted when you are in London.

C. G. P.—We do not know the articles you name, and there is no such manufacturer's name known to us; but the preparations of Messrs. Loeffund & Co. (advertised in our pages), 1483, Fenchurch-street, London, E.C., would suit admirably. Try their Cream Milk and the Cream Emulsion. The last especially will suit the case, if, as you say, cod liver oil of any kind is not tolerated,

MAPLE.—You are only exciting yourself without cause. Assuming you are well in every respect, there is no need for you to consult a doctor; but if any symptoms trouble you, or if you think a medical opinion would ease your mind, by all means consult a physician. All the same, we should say you are frightening yourself unnecessarily.

OMEGA.—1. We have answered your question already: Milk is the more readily digested. 2. New milk. 3. No.

W. PITT.—See advice given to "Sophia Frances" in HEALTH, No. 291.

GRATITUDE.—1. Try the effect of a lotion composed of one part Friar's Balsam and nine parts rose water. Look to your general health also. 2. The twitching is a consequence of low health. Take fifteen drops Fer Bravais after meals in water twice daily. 3. Rest after food regularly as a health-rule. 4. Such a hair-wash only cleanses the head, it has no effect on hair growth. See advice given to "Tenterden" in HEALTH, No. 289.

AN ANXIOUS GIRL.—Iodide of potash is given in many cases of enlarged glands, but in such a case as yours the glands should be

painted with tincture of iodine morning and night till the skin becomes tender; while, internally, cod liver oil (to which syrup of the iodide of iron has been added) is given. Get your druggist to add three drachms of this syrup to six ounces of Moller's cod liver oil and one ounce of mucilage, so as to make an emulsion, and take a dessertspoonful thrice daily after meals. There is no need for any operation, and the gland will gradually become normal. It is of no great consequence in any case.

L. MARSHALL.—Probably the damp atmosphere in which you work is a cause of your hair-weakness. Try to modify or avoid this cause, and for the rest follow advice given to "Tenterden" in No. 289, HEALTH.

JOHNNY.—As a highly suitable tonic, take a teaspoonful of the Easton's Syrup (sold by Mr. Sellers, 9, Farringdon-road, London, E.C.), and which can be sent you by post for 1s. 9d., after your meals in a wine-glass of water twice a day. This will brace you up. Bathe the eyes at night with tepid water to which a little weak tea has been added.

ANXIOUS STUDENT.—[Read our Rules for Correspondents, and notice that you infringe two of them—you address your letter to the Publisher, and you write on both sides of the paper.] You must revise your food-habits first of all. Let your food be of simple nature. Do not take solid flesh-meat in any quantity, but use Brand's Beef Essence to make soups; take white (boiled) fish, stale bread only, and drink milk peptonized with Fairchild's Powders. If constipated, take one or two Cascara Tablets at bedtime, and try Dahl's Cakes with your breakfast and tea. Probably, also, a dessertspoonful of Scott's Pure Cod Oil Emulsion will help you if taken twice

daily after meals. Take a tepid sponge bath each morning, and plenty of open-air exercise. See that you rest after your meals, and if not cured, write again.

CHESTER.—The bath should not be taken at night, take it tepid in the morning, and never wet your head. Brace up your system by taking a dessertspoonful of Thomson's Cod Oil Cream (40, Dublin-street, Edinburgh) regularly twice daily after meals during the winter. This will prevent cold and chill; and at bedtime, when your cold is present, inhale the vapour of a pint of very hot water to which a teaspoonful of Friar's Balsam has been added.

BANDAGE AND BELT.—1. Your own common sense should have informed you that the rules given in the pamphlet for healthy living (diet, exercise, sleep, &c.) are to be carried out as a rational means of cure first of all. The electrical treatment of Pulvermacher is used for cases in which the foregoing means are not sufficient to restore tone. 2. In moderation, certainly.

T. C. M.—Read the pamphlet, "A Lecture to Young Men" (post free for 1s. 1d. from Mr. Renshaw, 356, Strand, London, W.C.), and you will find full instructions regarding your health therein.

CHARLES PRENTICE.—Apply to Mr. Pulvermacher, 194, Regent-street, W., whose electrical belts are of genuine character. He will advise you as to the other matter you name.

Horsford's ACID PHOSPHATE.

A liquid preparation of the phosphates, recommended by physicians for

Dyspepsia, Mental and Physical Exhaustion, Nervousness, Weakened Energy, Indigestion, As a Drink in Fevers, &c.

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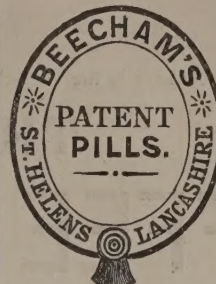
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